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EARTH DAY 2020

Earth Hour in Vietnam: a perspective from the electricity industry

Earth Hour is one of the most popular environmental events in Vietnam. However, looking at the rise in electricity consumption in the country, it is impossible to feel its impact.



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Apr 21, 2020



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Vietnamese people. The Vietnamese government – particularly the Ministry of Industry and Trade and the Ministry of Natural Resources and Environment – also helps with the organization of the campaign. This year, the National Power Dispatch Centre estimated that Vietnam saved 436,000 kilowatt-hours (kWh) of electricity, equivalent to VND 812.9 million (approx. US\$34,928) during one hour of the event.

Details of estimated saved kWh of electricity and their economic values are collected in the table below:

Year	kWh saved	Estimated economic value	Source
2020	436,000	VND 812.9 million (US\$34,928)	[1]
2019	492,000	VND 917 million (US\$39,500)	[2]
2018	485,000	VND 834 million (US\$36,612)	[3]
2017	471,000	VND 764 million (US\$33,616)	[4]
2016	451,000	VND 731.5 million (US\$31,238)	[5]
2015	520,000	VND 850 million (US\$39,100)	[6]
2014	431,000	VND 650 million (US\$27,740)	[7]
2013	401,000	VND 576 million (US\$24,582)	[8]
2012	546,000	VND 712 million (US\$30,386)	[9]
2011	400,000	VND 500 million (US\$21,338)	[9]
2010	500,000	VND 450 million (US\$19,204)	[9]



Table 1. Estimation of saved kWh during Earth Hour events in Vietnam and their economic values.

According to the estimation, from 2010 until 2020, Earth Hour in Vietnam has helped to save about 466,636 kWh per year on average, which translated to roughly VND 6 billion (US\$272,266). During the first year of the campaign in Vietnam, 2009, only six provinces participated; thus, only about 140,000 kWh of electricity was saved. However, in reality, the total amount of electric consumption has been rising continuously since 1990 (See Figure 1).

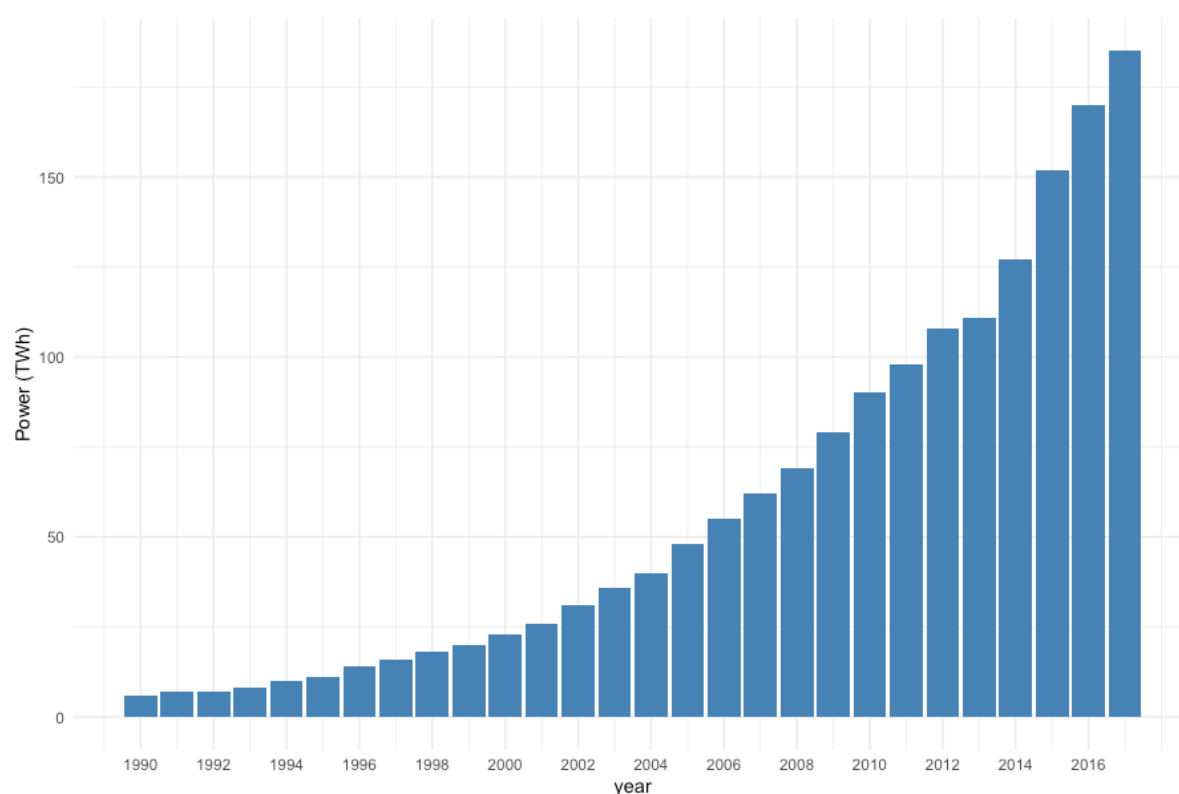


Figure 1. The total amount of electric consumption in Vietnam from 1990 until 2017. (Source: IEA)

In the 28-year period depicted in Fig. 1, Vietnam had multiplied its electric consumption by 30 times, from only 6 Terawatt hours (TWh) in 1990 to 185 TWh in 2017. From 2009 - the first Earth Hour event in Vietnam - to 2017, the figure had doubled. Furthermore, let's take a look at the revenue of three big power generation corporations in Vietnam: Power Generation Joint Stock Corporations, or Genco, 1, 2, and 3 (Figure 2), who occupies roughly 58% of the total capacity of the electricity industry in Vietnam. The total revenue of all three companies rose from a total of



One may have now asked one's self: "What is the point with this small amount of saved consumption?" True. The amount is negligible, in economic terms, on a national scale. But it helps to raise public awareness on a much bigger and difficult-to-solve problem. That is the problem of destroying our quintessential ecosystems in exchange for some temporary living comfort. The next lines will tell more in detail.

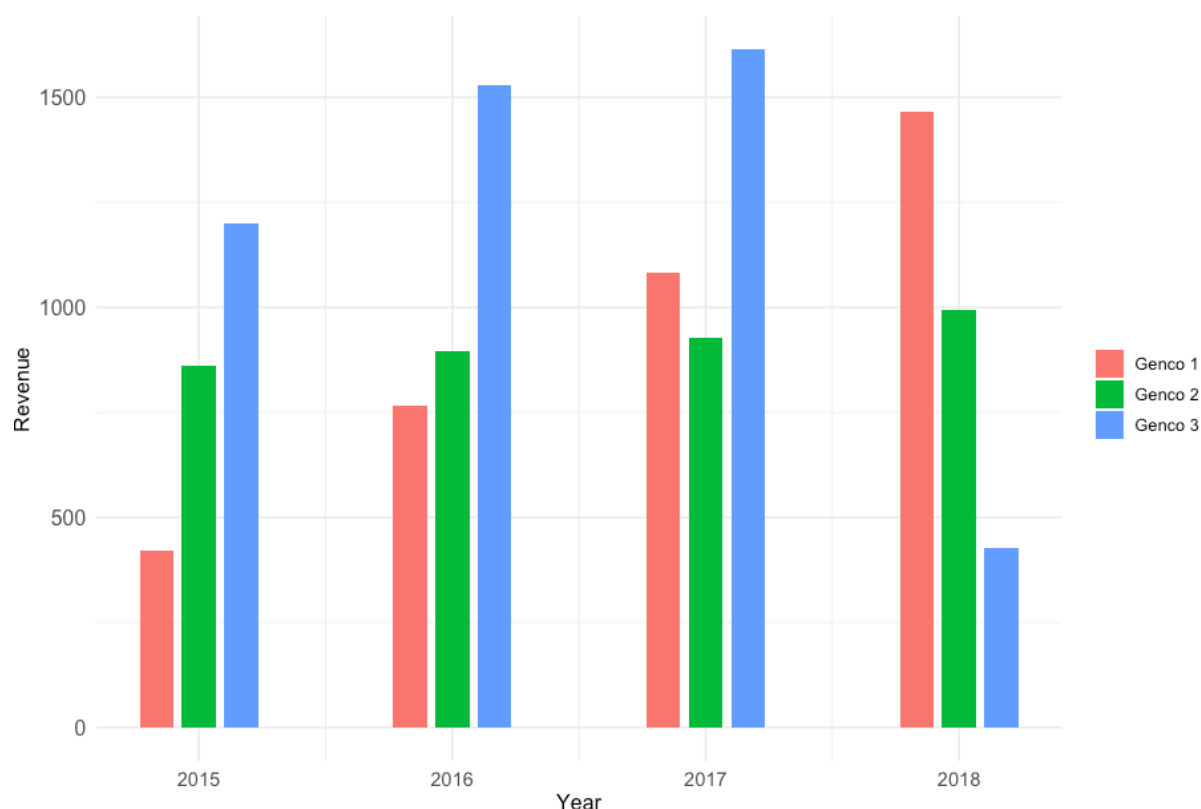


Figure 2. The revenue (in USD) of Power Generation Joint Stock Corporations (Genco) 1, 2, and 3 from 2015 until 2018. (Source: Corporate financial reports)

Most electric power companies in Vietnam utilize hydropower (which requires dams) or thermal power (which burns fossil fuel or natural gas). Corresponding with the total amount of electric consumption in Vietnam, Fig. 3 suggested the rise of power generation from these three sources. From 2009 to 2017, electricity from hydropower sources jumped from 29,981 Gigawatt-hour (GWh) to 88,982 GWh. Coal and natural gas also saw similar rises in the same period. However, outputs from both sources have shown a downward trend since 2016.

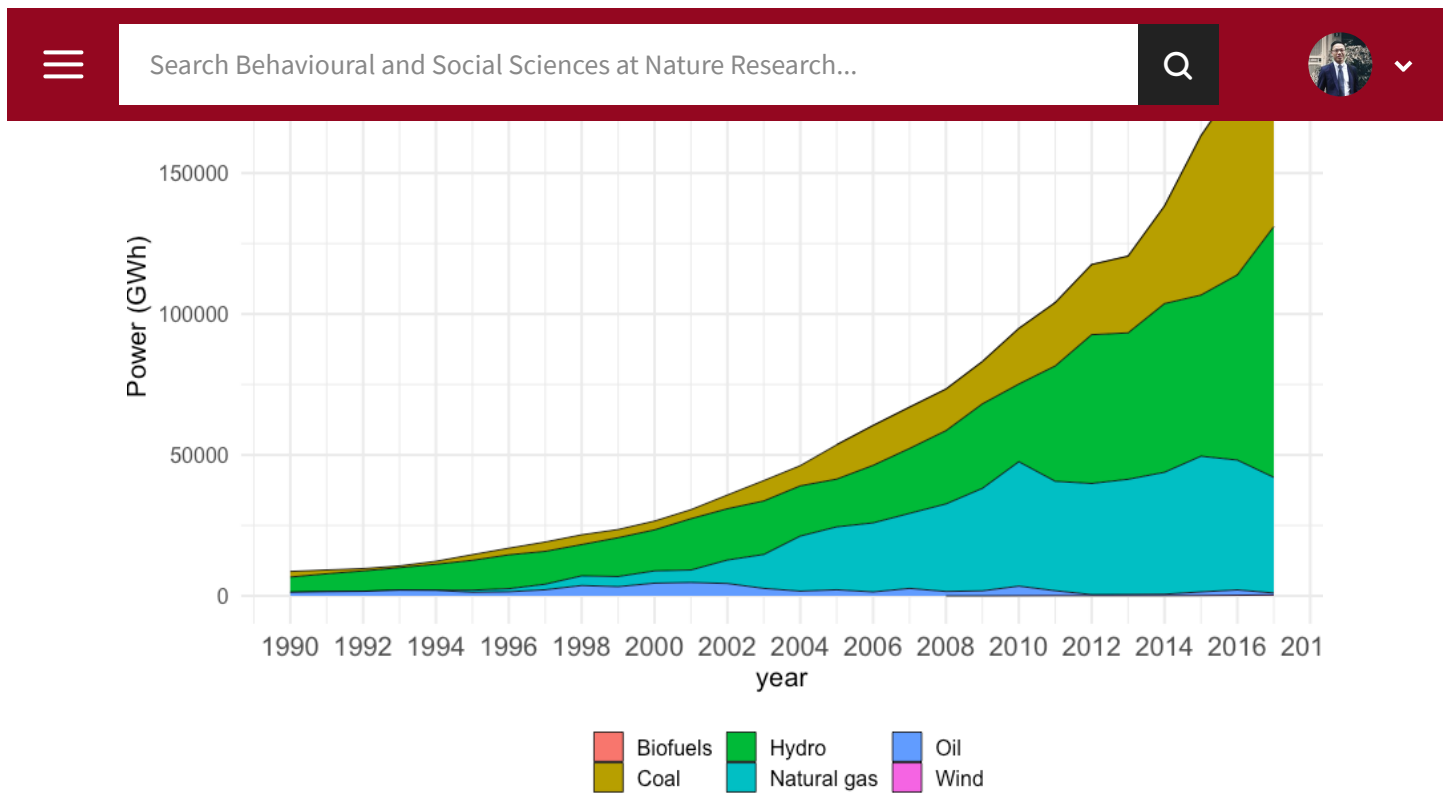


Figure 3. The sources of electricity in Vietnam from 1990 until 2017. (Source: IEA)

The rise in electricity consumption in Vietnam owes itself to the growth of the Vietnamese economy. In the 2000-2020 period, the average growth rate of Vietnam is 6.51%. In the last two years, Vietnam has maintained its growth rate at 7%, even higher than China. Subsequently, the demand for electricity is expected to double in the next ten years, along with heavy pollution [10].

While hydroelectric plants are less detrimental to the environment than thermal plants, they have impacted the biodiversity and natural habitat in their surrounding areas. Investigative reports have shown that hydropower plants, especially small ones, caused severe drought [11]. Moreover, forests were also cut down to make space for new power plants.

In 2019, we had the opportunity to assist the International Union for Conservation of Nature (IUCN) Vietnam in an initiative called Vietnam Business for Environment (VB4E). The main goal of the initiative is to engage Vietnamese businesses in environmental and biodiversity conservation issues. Through tracking all major environment-related events and stakeholders in Vietnam, we were able to identify main problems relating to the relationship between Vietnam businesses and environmental conservation.

The findings, which are currently under peer review, suggest the reasons for Vietnam businesses to engage in pro-environmental behaviors are practical and self-serving, i.e., profitability or



a high degree of involvement by governmental agencies in helping businesses bypassing environmental guidelines.

Through this post, we want to introduce a different perspective to look at a pro-environment event such as Earth Hour or Earth Day. Earth Hour has been widely accepted as a meaningful pro-environment event in Vietnam. However, its true impact is still hidden, much like the hidden environmental cost of Vietnam's exponential electric consumption and production. Switching off the light needs to surpass its symbolic significance as well as its restrained benefits. Earth Hour needs to become the pretext to bring attention to the tensions between environment conservation and economic growth – and, more importantly, on the level of businesses, between insistent profit-making and actions detrimental to the environment. Earth Hour is in and of itself reflecting our genuine effort to avoid policy failures in protecting the health of Earth [13].

Poster Image: Hoa Binh Hydroelectric Dam – one of the largest hydroelectric dams in Vietnam.

Source: [Wikimedia Commons](#).

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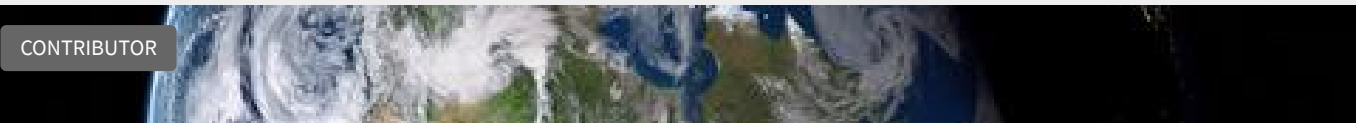
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